

# इंटरनेट

# मानक

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IS 4341 (1997): Household Sewing Machines - Feed Bar  
Rollers and Studs [MED 29: Sewing Machines]



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भारतीय मानक  
घरेलू सिलाई मशीन — फीड दंड रोलर और  
स्टड की विशिष्टि  
( पहला पुनरीक्षण )

*Indian Standard*

HOUSEHOLD SEWING MACHINES — FEED BAR  
ROLLERS AND STUDS — SPECIFICATION  
( *First Revision* )

ICS 61.080

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**BUREAU OF INDIAN STANDARDS**  
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NEW DELHI 110002

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Price Group 3

## FOREWORD

This Indian Standard ( First Revision ) was adopted by the Bureau of Indian Standards, after the draft finalized by the Sewing Machines Sectional Committee had been approved by the Light Mechanical Engineering Division Council.

This standard was originally published in 1967. Its first revision has been undertaken to change dimensions for feed bar rollers and studs of Type 'B'.

Certain non-metallic materials, such as Derlin have been recently developed and are still under trial. These shall be considered for inclusion in the standard at a later stage.

For general requirements of sewing machines IS 1610 : 1989 'Household sewing machines — General requirement ( *second revision* )', may be referred. A list of Indian Standards on household sewing machines and their components is given in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values ( *revised* )'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard*

# HOUSEHOLD SEWING MACHINES — FEED BAR ROLLERS AND STUDS — SPECIFICATION

( *First Revision* )

## 1 SCOPE

This standard specifies the requirements for two types of feed bar rollers and studs for sewing machines for household purposes.

## 2 REFERENCES

The following Indian Standards contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
1501 ( Part 1 ) : 1984	Method for vickers hardness test for metallic materials : Part 1 HV 5 to HV 100 ( <i>second revision</i> )
2500 ( Part 1 ) : 1992	Sampling inspection procedure: Part 1 Attributes sampling plans indexed by acceptance quality level ( AQL ) for lot by lot inspection ( <i>second revision</i> )

## *IS No.*

4432 : 1988

## *Title*

Case hardening steel ( *first revision* )

4905 : 1968

Methods for random sampling

## 3 NOMENCLATURE

The nomenclature of feed bar rollers and studs shall be as indicated in Fig. 1.

## 4 TYPES

The feed bar rollers and studs shall be either Type 'A' or Type 'B'.

## 5 MATERIAL

The rollers and studs shall be manufactured from any suitable case hardening steel ( *see* IS 4432 ).

## 6 HARDNESS

The rollers shall be case hardened to attain a hardness value of 400 HV, *Min* [ *see* IS 1501 ( Part 1 ) ].

## 7 DIMENSIONS AND TOLERANCES

7.1 The dimensions and tolerances for feed bar rollers and studs shall be as shown in Fig. 2 and 3.

7.2 The error in the concentricity of the external bearing face of the roller when rotated about the main hole of the roller shall not exceed 0.01 mm.

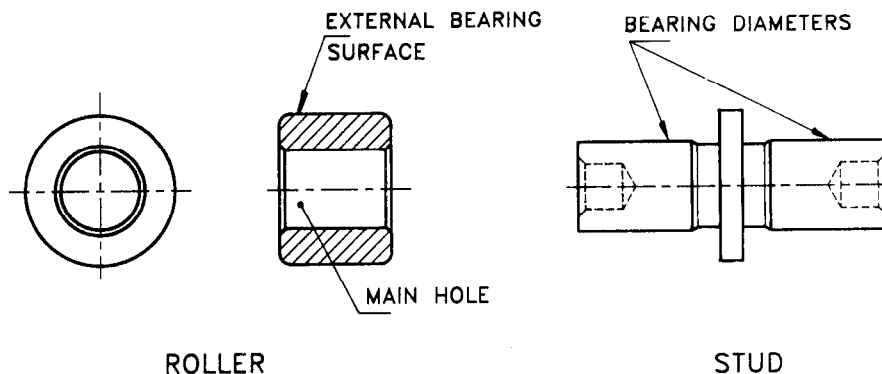
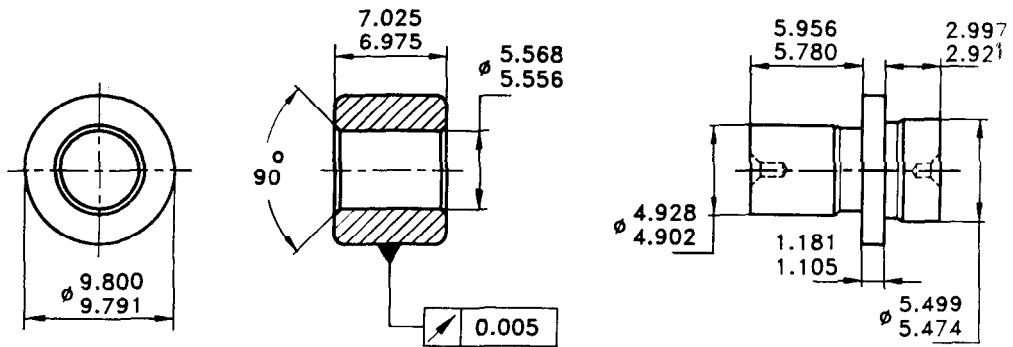
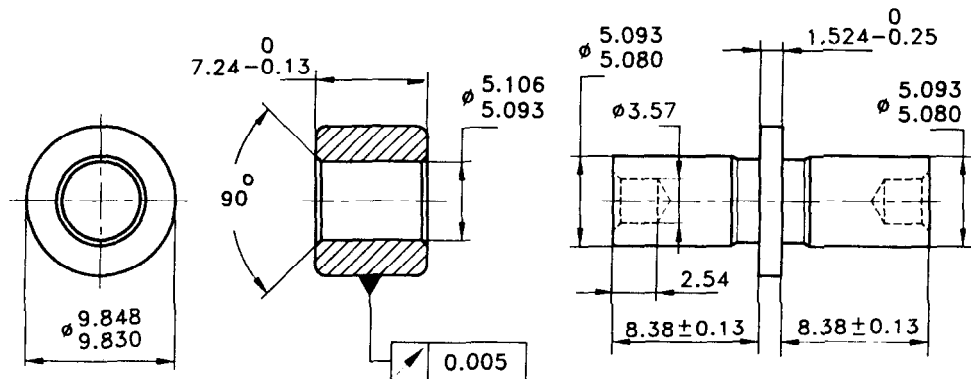


FIG. 1 NOMENCLATURE FOR FEED BAR ROLLER AND STUD



All dimensions in millimetres.

FIG. 2 DIMENSIONS FOR FEED BAR ROLLER AND STUD — TYPE A



All dimensions in millimetres.

FIG. 3 DIMENSIONS FOR FEED BAR ROLLER AND STUD — TYPE B

## 8 WORKMANSHIP AND FINISH

8.1 The main hole and external bearing surface of the roller shall be ground to smooth finish and shall be free from rust, dust, etc.

8.2 The bearing diameter of the stud shall be precision ground to a smooth finish and shall be free from rust, dust, etc.

## 9 SAMPLING

Unless otherwise agreed to between the purchaser and the supplier the sampling plan as given in Annex A shall be followed. For further information reference may be made to IS 2500 (Part 1) and IS 4905.

## 10 MARKING

10.1 Each piece of the feed bar roller and stud shall be legibly and indelibly marked with the following:

- Source of manufacture and trade-mark, if any; and
- Type of feed bar roller and stud.

## 10.2 BIS Certification Marking

The product may also be marked with the Standard Mark.

10.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

## 11 PACKING

Each feed holder rollers and studs shall be given a suitable anti rust coating and wrapped in polyethylene bags. The wrapped feed bar rollers and studs shall be securely packed in accordance with the best prevalent trade practice. Each package shall bear address of the source of manufacture, type and description of contents.

## ANNEX A

### ( Clause 9 )

#### SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY

##### A-1 SCALE OF SAMPLING

###### A-1.1 Lot

In any consignment, all the feed bar rollers of the same type and manufactured from the same material under essentially similar conditions of manufacture shall be grouped together to constitute a lot.

**A-1.2** For ascertaining the conformity of the lot to the requirements of the specification, tests shall be carried out for each lot separately. The number of feed bar rollers to be selected at random for this purpose shall be in accordance with col 1 and 2 of Table 1.

**A-1.3** If the items are packed individually, in order to ensure the randomness of selection, random number tables shall be used. In case such tables are not available the following procedure may be adopted:

‘Starting from any feed bar roller in the lot, count them in one order as 1,2,3,.....up to  $r$  and so on, where  $r$  is the integral part of  $N/n$  (  $N$  being the lot size and  $n$  the sample size ). Each feed bar roller thus counted shall be selected to constitute the sample.’

**A-1.4** If the feed bar rollers are packed in different cartons, a suitable number of cartons (not less than 20 percent of the total in the lot subject to a minimum of 2) shall be chosen at random. From each of the cartons

so chosen, an approximately equal number of feed holder rollers shall be picked up from its different parts so as to obtain the required number of needle bar link studs specified in col 1 and 2 of Table 1.

##### A-2 NUMBER OF TESTS AND CRITERIA FOR CONFORMITY

**A-2.1** The feed bar rollers selected according to **A-1.2** and **A-1.3** or **A-1.4** shall be examined for dimensions and tolerances (*see* 7) and workmanship and finish (*see* 8). If the number of feed bar rollers failing to meet one or more of the requirements mentioned above is less than or equal to the permissible number of defectives given in col 3 of Table 1, the lot shall be declared as conforming to the requirements of these characteristics.

**A-2.2** In the case of those lots which have been found satisfactory according to **A-2.1**, a number of feed bar rollers equal to the sample size indicated in col 4 of Table 1, shall be subjected to hardness test (*see* 6). Any roller failing to meet the requirement for hardness shall be considered to be defective.

**A-2.2.1** If no defectives are found among the feed bar rollers subjected to the hardness test (*see* **A-2.2**), the lot shall be declared as conforming to the requirements of the specification, otherwise not.

**Table 1 Scale of Sampling and Permissible Number of Defects**  
( Clauses A-1.2, A-1.4, A-2.1 and A-2.2 )

No. of Feed Bar Rollers in the Lot	For Dimensions, Tolerances, and Workmanship and Finish		Sample Size for Hardness
	Sample Size $n$	Permissible No. of Defectives*	
$N$ (1)	(2)	(3)	(4)
Up to 15	5	0	2
16 to 40	8	0	3
41 to 110	13	0	3
111 to 300	20	1	5
301 to 500	32	1	6
501 to 800	50	2	8
801 to 1300	80	3	10
1301 and above	125	5	15

\*This ensures that lots containing one and a half percent or less defectives will be accepted most of the time.



## ANNEX B

### ( Foreword )

#### LIST OF INDIAN STANDARDS ON SEWING MACHINES

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
1294 : 1989	Bobbins for sewing machines for household purposes ( <i>third revision</i> )	4338 : 1991	Household sewing machines — Vertical oscillating shuttle — Specification ( <i>second revision</i> )
1295 : 1990	Household sewing machines — Needle bar — Specification ( <i>second revision</i> )	4339 : 1997	Household sewing machines — Needle bar link studs — Specification ( <i>first revision</i> )
1297 : 1991	Household sewing machines — Presser bar — Specification ( <i>third revision</i> )	4340 : 1967	Needle bar link for sewing machines for household purposes
1610 : 1989	Household sewing machines — General requirements ( <i>second revision</i> )	4341 : 1997	Household sewing machines — Feed bar rollers and studs — Specification ( <i>first revision</i> )
2181 : 1973	Household sewing machine needles ( <i>first revision</i> )	4342 : 1967	Square slider for oscillating rock shaft for sewing machines for household purposes
3290 : 1994	Household sewing machines — Thread take-up lever sub-assembly for cam type sewing machines — Specification ( <i>third revision</i> )	4632 : 1968	Square slider for stitch regulator shaft for sewing machines for household purposes
3291 : 1968	Thread take-up cams for sewing machines for household purposes ( <i>first revision</i> )	4735 : 1968	Arm shaft cams for sewing machines for household purposes
3299 : 1969	Oscillating rock shafts for sewing machines for household purposes ( <i>first revision</i> )	5740 : 1996	Household sewing machines — Memorandum of screw threads for sewing machine components ( <i>first revision</i> )
3375 : 1991	Household sewing machines — Bobbin case — Specification	6903 : 1973	Glossary of terms relating to sewing machines for household purposes
3816 : 1966	Connecting rods for sewing machines for household purposes	7491 : 1989	Sewing machines, household — Accuracy requirements ( <i>first revision</i> )
3817 : 1991	Household sewing machines — Arms shaft — Specification ( <i>first revision</i> )	7492 : 1989	Sewing machines, household — Sewing requirements ( <i>first revision</i> )
3868 : 1966	Feed lifting rock shaft for sewing machines for household purposes	7493 : 1989	Sewing machines, household — Durability requirements ( <i>first revision</i> )
4181 : 1967	Feed fork for sewing machines for household purposes	9874 : 1981	Arm and bed assembly for sewing machines for household purposes
4188 : 1996	Household sewing machines — Oscillating shaft ( <i>first revision</i> )	10304 : 1982	Feed rock shaft for sewing machines for household purposes

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
10305 : 1982	Feed rock shaft crank for sewing machine for household purposes	12798 : 1989	Household sewing machines — Fly wheels — Specification
10306 : 1982	Feed lifting rock shaft crank for sewing machines for household purposes	13120 : 1991	Household sewing machines — Flywheel bush— Specification
11280 : 1985	Household sewing machines — Feed bar ( <i>first revision</i> )	13192 : 1991	Household sewing machines — Hand attachment assembly
11345 : 1985	Oscillating shaft crank for sewing machines for household purposes	13806 : 1993	Household sewing machine — Closed type shuttle race assembly — Specification
11347 : 1995	Household sewing machines — Shuttle driver — Specification ( <i>first revision</i> )	13825 : 1993	Household sewing machine — Arm shaft front bush — Specification
12058 : 1987	Slide plates for sewing machines for household purposes	13872 : 1993	Household sewing machine — Stitch regulator — Specification
12740 : 1989	Household sewing machines — Stand — Specification	13972 : 1994	Household sewing machine — Bobbin winder assembly — Specification
12789 : 1989	Household sewing machines — Table and base	14207 : 1995	Household sewing machine — Open type shuttle race subassembly — Specification

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#### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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